Contents Volume 257 2003

Volume 257, No. 1 November (I) 2003

Part I

Symbiotic Nitrogen Fixation

18th North American Conference on Symbiotic Nitrogen

Guest editor:
D. Emerich

Preface vii

A Krüppel-like transcription factor gene is involved in salt stress responses in *Medicago* spp.
F. Merchan, C. Breda, J. Pérez-Hormaeche, C. Sousa, A. Kondorosi, O.M. Aguilar, M. Megias, M. Crespi 1–9

Genes encoding a fructose-1,6-bisphosphate aldolase and a fructose-1,6-bisphosphatase are present within the gene cluster for mimosine degradation in *Rhizobium* sp. strain TAL1145
J.D. Awaya, P.M. Fox, D. Borthakur 11–18

***MsPG3* polygalacturonase promoter elements necessary for expression during *Sinorhizobium meliloti- Medicago truncatula* interaction**
I.D. Rodríguez-Llorente, J. Pérez-Hormaeche, M. Dary, M.A. Caviedes, T.H. Trinh, A. Kondorosi, P. Ratet, A.J. Palomares 19–26

Recovery of nitrogenase from aerobically isolated soybean nodule bacteroids
D.B. Karr, N.W. Oehrle, D.W. Emerich 27–33

Diazotrophic bacteria associated with banana (*Musa* spp.).
L. Martínez, J. Caballero-Mellado, J. Orozco, E. Martínez-Romero 35–47

Quantitative assessments of the host range and strain specificity of endophytic colonization by *Klebsiella pneumoniae* 342
Y. Dong, A.L. Iniguez, E.W. Triplett 49–59

Part II

Regular articles

Dynamics of phosphorus fractions during fallow with natural vegetation and planted *Pueraria phaseoloides* in south-western Nigeria
G.O. Kolawole, G. Tian, H. Tijani-Eniola 63–70

Seasonality of arbuscular mycorrhizal hyphae and glomalin in a western Montana grassland
E.R. Lutgen, D. Muir-Clairmont, J. Graham, M.C. Rillig **71–83**

Deep placement of manganese fertiliser improves sustainability of lucerne growing on bauxite residue: A glasshouse study
M.J. Gherardi, Z. Rengel **85–95**

The vertical microdistribution of cyanobacteria and green algae within desert crusts and the development of the algal crusts
C. Hu, D. Zhang, Z. Huang, Y. Liu **97–111**

Cloning and characterization of two genes encoding sulfate transporters from rice (*Oryza sativa* L.)
R.M. Godwin, A.L. Rae, B.J. Carroll, F.W. Smith **113–123**

Effects of ethylene and inhibitors of ethylene synthesis and action on nodulation in common bean (*Phaseolus vulgaris* L.)
S.M. Tamimi, M.P. Timko **125–131**

Measured and modelled differences in nutrient concentrations between rhizosphere and bulk soil in a Norway spruce stand
R.D. Yanai, H. Majdi, B.B. Park **133–142**

Rhizospheric degradation of phenanthrene is a function of proximity to roots
S.C. Corgié, E.J. Joner, C. Leyval **143–150**

Root growth and water uptake in winter wheat under deficit irrigation
Q. Xue, Z. Zhu, J.T. Musick, B.A. Stewart, D.A. Dusek **151–161**

The relative exclusion of zinc and iron from rice grain in relation to rice grain cadmium as compared to soybean: Implications for human health
R W. Simmons, P. Pongsakul, R.L. Chaney, D. Saiyasitpanich, S. Klinphoklap, W. Nobuntou **163–170**

EDTA-assisted heavy-metal uptake by poplar and sunflower grown at a long-term sewage-sludge farm
M.S. Liphadzi, M.B. Kirkham, K.R. Mankin, G.M. Paulsen **171–182**

Soil C and N responses to woody plant expansion in a mesic grassland
J.K. McCarron, A.K. Knapp, J.M. Blair **183–192**

Ecosystem productivity is independent of some soil properties at equilibrium
M.G.R. Cannell, J.H.M Thornley **193–204**

Corn (*Zea mays* L.) growth, leaf pigment concentration, photosynthesis and leaf hyperspectral reflectance properties as affected by nitrogen supply
D. Zhao, K. Raja Reddy, V.G. Kakani, J.J. Read, G.A. Carter **205–217**

Interaction of drought and high temperature on photosynthesis and grain-filling of wheat
N.H. Shah, G.M. Paulsen **219–226**

Zinc phytotoxicity to oilseed rape grown on zinc-loaded substrates consisting of Fe oxide-coated and calcite sand
I. Montilla, M.A. Parra, J. Torrent **227–236**

Nitrogen mineralisation in podzol soils under boreal Scots pine and Norway spruce stands
K. Pajuste, J. Frey **237–247**

Volume 257, No. 2, December 2003

Part I

Dryland Salinity

Symposium on Dryland Salinity, Perth, November 2001

Guest editor:
H. Lambers

Introduction
H. Lambers **v–vii**

Root-zone constraints and plant-based solutions for dryland salinity
P. Rengasamy, D. Chittleborough and K. Helyar **249–260**

Plants for amelioration of subsoil constraints and hydrological control: the primer-plant concept
I.A.M. Yunusa and P.J. Newton **261–281**

Selecting species for recharge management in Mediterranean south western Australia – some ecophysiological considerations
D.A. White, M. Battaglia, C. Macfarlane, D. Mummery, J.F. McGrath and C.L. Beadle **283–293**

Seasonal patterns in water use and leaf turnover of different plant functional types in a species-rich woodland, south-western Australia
E.J. Veneklaas and P. Poot **295–304**

Water budgets and nutrients in a native *Banksia* woodland and an adjacent *Medicago sativa* pasture
P.R. Ward, I.R.P. Fillery, E.A. Maharaj and F.X. Dunin **305–319**

Productivity and water relations of burnt and long-unburnt semi-arid shrubland in Western Australia
K.A. Mappin, J.S. Pate and T.L. Bell **321–340**

Preclearing hydrology of the Western Australia wheatbelt: Target for the future?
T.J. Hatton, J. Ruprecht and R.J. George **341–356**

The eco-hydrology of partly cleared, native ecosystems in southern Australia: a review
P.L. Eberbach **357–369**

Natural ecosystems: Pattern and process in relation to local and landscape diversity in southwestern Australian woodlands
R.J. Hobbs and V.A. Cramer **371–378**

Part II

Regular articles

Drought-induced variations of water relations parameters in *Olea europaea*
B. Dichio, C. Xiloyannis, K. Angelopoulos, V. Nuzzo, S.A. Bufo and G. Celano **381–389**

The role of rhizosphere bacteria in herbicide-mediated increase in *Rhizoctonia solani*-induced cotton seedling damping-off
A. Heydari and I.J. Misaghi **391–396**

Endophytic *Pseudomonas* spp. populations of pathogen-infected potato plants analysed by 16S rDNA- and 16S rRNA-based denaturating gradient gel electrophoresis
B. Reiter, N. Wermbter, S. Gyamfi, H. Schwab, A. Sessitsch **397–405**

Antioxidative defenses and water deficit-induced oxidative damage in rice (*Oryza sativa* L.) growing on non-flooded paddy soils with ground mulching
Y. Liang, F. Hu, M. Yang, J. Yu **407–416**

Photosynthesis impairment in cassava leaves in response to nitrogen deficiency
J.L. Cruz, P.R. Mosquim, C.R. Pelacani, W.L. Araújo, F.M. DaMatta **417–423**

Nitrogen and phosphorus harvest indices of common bean cultivars: Implications for yield quantity and quality
A.P. Araújo and M.G. Teixeira **425–433**

Proportion of fungal mantle, cortex and stele of ectomycorrhizas in *Picea abies* (L.) Karst. in different soils and site conditions
I. Ostonen and K. Lõhmus **435–442**

Effects of soil cadmium on *Pinus sylvestris* L. seedlings
C.-G. Kim, J.N.B. Bell and S.A. Power **443–449**

Evolution of copper-tolerance and increased expression of a 2b-type metallothionein gene in *Silene paradoxa* L. populations
A. Mengoni, C. Gonnelli, H.W.J. Hakvoort, F. Galardi, M. Bazzicalupo, R. Gabbrielli and H. Schat **451–457**

Impact of auxin-compounds produced by the antagonistic fungus *Pythium oligandrum* or the minor pathogen *Pythium* group F on plant growth
G. Le Floch, P. Rey, E. Benizri, N. Benhamou and Y. Tirilly **459–470**

Volume contents **471–474**

Author index **475–476**